

REMARKS

Claims 1-140 are now pending in the application. Claims 47, 50, 51, 58, 62, 67, 71-74, 79, 82, 83, 86-88, 90-92, 94-97, 99-101, 103-104, 106 and 136-140 are amended herein. New Claims 141-150 are presented herein. While Applicant disagrees with the current rejections, Applicant has amended the claims to expedite prosecution. Applicant reserves the right to pursue the claims as originally filed in one or more continuing applications. Support for the amendments to the claims can be found throughout the drawings and specification. The amendments are shown at least in FIG. 3 and in paragraphs [0046], [0049]-0051], [0057], [0065], and [0072]. As such, no new matter is added. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

Applicant would like to thank the Examiner for courtesy extended during the interviews on March 26, 2008 and April 23, 2008. During the interviews, the Examiner agreed that the claims as amended herein distinguish over the prior art of record subject to further consideration and/or search.

DRAWINGS

The drawings stand objected to for certain informalities. The Examiner alleges that Claims 73 and 74 recite limitations that are not shown in the drawings. Claims 73 and 74 are amended herein to remove the limitations of concern. Reconsideration and withdrawal of this objection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 102

Claims 47-48, 75-76, 79-80, 106-107, 132-133, 136, 138, and 140 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Behrens et al. (U.S. Pat. No. 6,819,514). This rejection is respectfully traversed.

With respect to Claim 47, Behrens does not at least show, teach or suggest a communication system that includes: a first filter; a second filter that is responsive to the first filter; and one of a gain controller and a timing phase controller that is responsive to an output of the second filter and to an output of a reconstruction filter.

By using the second filter, the communication system claimed may account for changes in gain and timing phase errors associated with the first filter. The errors may be a result of constrained tap weight coefficients of the first filter.

The Examiner alleges that Behrens discloses a first filter, a second filter and a gain controller and refers to a discrete equalizer filter B103, to a FIR interpolator B122 and to a variable gain amplifier (VGA) 22 of Behrens.

As best understood by Applicant, the VGA 22 operates based on an output from a gain control 50, which in turn operates based on an output from an interpolated timing recovery device B100 that includes the FIR interpolator B122. The VGA 22 does not operate based on an output of a reconstruction filter and an output of a second filter, as claimed. Behrens appears to only disclose the discrete equalizer filter B103 and the FIR interpolator B122. Behrens does not disclose a first filter, a second filter and a reconstruction filter or provide the relationship and/or dependency between these filters as claimed.

For anticipation to be present under 35 U.S.C §102(b), there must be no difference between the claimed invention and the reference disclosure as viewed by one skilled in the field of the invention. *Scripps Clinic & Res. Found. V. Genentech, Inc.*, 18 USPQ.2d 1001 (Fed. Cir. 1991).

Therefore, Claim 47 is allowable for at least the above reasons. Claims 79, 106 and 140 are allowable for at least similar reasons. Claims 48-49, 52-78, 80-81, 84-105, 107-135 and 141-147 ultimately depend from Claims 47, 79 and 106 and are allowable for at least the same reasons.

With respect to Claim 136, Behrens does not at least show, teach or suggest a communication system that includes a first filter and a second filter that has tap weight coefficients that are generated based on an output of the first filter.

As best understood by Applicant, the tap weight coefficients of the FIR interpolator B122 are not generated based on the tap weight coefficients of the discrete equalizer filter B103 of Behrens.

Therefore, Claim 136 is allowable for at least the above reasons. Claim 138 is allowable for at least similar reasons.

REJECTION UNDER 35 U.S.C. § 103

Claims 137 and 139 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Behrens et al. (U.S. Pat. No. 6,819,514) in view of Patapoutian et al. (U.S. Pat. No. 5,825,318). This rejection is respectfully traversed.

With respect to Claim 137, Behrens and Patapoutian do not at least show teach or suggest a communication system that includes: a first filter; a second filter that is responsive to an output of the first filter; at least one of a gain controller and a timing phase controller that is responsive to an output of the second filter; and an error generator that signals one of the gain controller and the timing phase controller based on the output of said second filter and an output of a reconstruction filter. The reconstruction filter is responsive to an output of the first filter.

As best understood by Applicant, Behrens does not disclose the claimed error generator. In Behrens, the VGA 22 and the gain control 50 operate based on an output of the FIR interpolator B122. The VGA 22 and the gain control 50 do not receive the outputs from two filters. The VGA 22 and the gain control 50 are not responsive to an output of a reconstruction filter and to an output of a second filter that is responsive to an output of a first filter.

As best understood by Applicant, Patapoutian discloses an error circuit 96 that operates based on outputs of a chunk synchronization circuit 90 and a target filter 110. The error circuit 96 does not operate based on an output of a reconstruction filter and an output of a second filter that is responsive to an output of a first filter. Patapoutian appears to only disclose a FIR filter 70 and a target filter 110. Patapoutian does not disclose a first filter, a second filter, and a reconstruction filter or provide the relationship and/or dependency between these filters as claimed.

It is a longstanding rule that to establish a prima facie case of obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 143 (CCPA 1974), see MPEP §2143.03.

Therefore, Claim 137 is allowable for at least the above reasons. Claim 139 is allowable for at least similar reasons. Claims 148-150 ultimately depend from Claim 137 and are allowable for at least similar reasons.

ALLOWABLE SUBJECT MATTER


The Examiner states that Claims 1-46 are allowed. The Examiner also states that Claims 50-51, 54-74, 82-83, 86-103, 109-110, and 113-131 would be allowable if rewritten in independent form. Accordingly, in the interest of expediting prosecution of the present application and without conceding the issue of patentability, Applicant has amended Claims 50-51 and 82-83 to include the limitations of the base claim and any intervening claims. Therefore, Claims 50-51 and 82-83 should now be in condition for allowance. Applicant reserves the right to rewrite Claims 54-74, 86-103, 109-110, and 113-131 in independent form in the future if needed.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: _____

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